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# Small digitwise perturbations of a number make it normal to unrelated bases

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## Abstract

Let r, g ≥ 2 be integers such that log g/log r is irrational. We show that under r-digitwise random perturbations of an expanded to base r real number x, which are small enough to preserve r-digit asymptotic frequency spectrum of x, the g-adic digits of x tend to have the most chaotic behaviour.